



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 175635

TO: Andrew D Kosar
Location: 3c04 / 3c18
Art Unit: 1654
Friday, January 13, 2006

Case Serial Number: 10/798218

From: Noble Jarrell
Location: Biotech-Chem Library
Rem 1B71
Phone: 272-2556

Noble.jarrell@uspto.gov

Search Notes

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Andrew D. Kosar Examiner# : 80341 Date: 1/4/06Art Unit: 1654 Phone Number: (571)272-0913 Serial Number: 10/798,218Mail Box and Bldg/Room Location: Mail: REM 3c18 Results Format Preferred (circle) Paper Disk E-mail
Office: REM 3c04**If more than one search is submitted, please prioritize searches in order of need.**

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Organic compounds with biological activity as thrombin inhibitors and use thereofInventors (please provide full names): Marcel ThurkEarliest Priority Filing Date: 9/10/2002 (US PCT); 9/10/2001 (Germany)

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search the following peptide compound, corresponding to attached claim 177. The claim is drawn to hexapeptides with terminal modification(s).

(each position can be L or D)

X1 is Val, Ala, Leu, Ile, Nle, Asn, Gln, Ser, Thr, Tyr, Arg, Lys or Orn

X2 is Val, Ala, Leu, Ile, Nle, Ser, Thr, Tyr, Pro, Cit, Arg, Lys, Orn, His, Glu, Asp, Trp, Cha or Chg

X3 is Cha or Chg

X4 is Pro or Aze

X5 is Tyr or Phe

X6 is Arg, Lys, Orn or Har

X3-X4-X5 make a pseudo tripeptide core structure.

Please note, the compounds may also be des-X1 and/or des-X6RECEIVED
JAN - 5 2006
STIC**STAFF USE ONLY**Searcher: nole
Searcher Phone: _____
Searcher Location: _____
Date Searcher Picked Up: 1/13/06
Date Completed: 1/13/06
Searcher Prep & Review Time: 10
Clerical Prep Time: _____
Online Time: 49**Type of search**NA Sequence (#) _____
AA Sequence (#) _____
Structure (#) 4
Bibliographic ✓
Litigation _____
Full Text _____
Patent Family _____
Other _____**Vendors and cost where applicable**STN ✓
Dialog _____
Questel/Orbit _____
Dr. Link _____
Lexis/Nexis _____
Sequence System _____
WWW/Internet _____
Other (specify) _____

Application No.: 10/798,218

2

Docket No.: 02198/0200973-US0

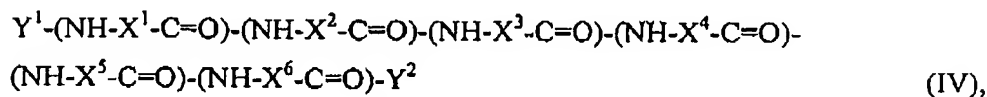
AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-176. Cancelled.

177. (New) A compound of formula (IV)



wherein Y^1 is either

- a) a hydrogen or
- b) a methyl group or
- c) an acetyl group or
- d) is characterized by a backbone consisting of a chain of 1 to 32 carbon atoms,

wherein $NH-X^1-C=O$ is a D- or L-amino acid selected from the group consisting of

- a) valine;
- b) alanine;
- c) leucine;
- d) isoleucine;
- e) norleucine;
- f) asparagine;
- g) glutamine;
- h) serine;
- i) threonine;
- j) tyrosine;
- k) arginine;

{W:\02198\0200973us0\00601640.DOC [REDACTED]}

Application No.: 10/798,218

3

Docket No.: 02198/0200973-US0

l) lysine; and

m) ornithine,

wherein $\text{NH-X}^2\text{-C=O}$ is a D- or L-amino acid selected from the group consisting of

- a) alanine;
- b) valine;
- c) leucine;
- d) isoleucine;
- e) norleucine;
- f) serine;
- g) threonine;
- h) tyrosine;
- i) proline;
- j) citrulline;
- k) arginine;
- l) lysine;
- m) ornithine;
- n) histidine;
- o) glutamic acid;
- p) aspartic acid;
- q) tryptophan;
- r) cyclohexylalanine; and
- s) cyclohexylglycine,

wherein $\text{NH-X}^3\text{-C=O}$ is an amino acid selected from the group consisting of

- a) L-cyclohexylalanine;
- b) D-cyclohexylalanine;
- c) L-cyclohexylglycine; and
- d) D-cyclohexylglycine,

wherein $\text{NH-X}^4\text{-C=O}$ is an amino acid selected from the group consisting of

- a) L-proline;
- b) D-proline;

{ W:\02198\0200973us0\00601640.DOC (00000000000000000000000000000000) }

Application No.: 10/798,218

4

Docket No.: 02198/0200973-US0

c) L-azetidine-2-carboxylic acid; and

d) D-azetidine-2-carboxylic acid,

wherein $\text{NH-X}^5\text{-C=O}$ is an amino acid selected from the group consisting of

a) L-tyrosine;

b) D-tyrosine;

c) L-phenylalanine; and

d) D-phenylalanine,

wherein $\text{NH-X}^6\text{-C=O}$ is an amino acid selected from the group consisting of

a) L-arginine;

b) D-arginine;

c) L-lysine;

d) D-lysine;

e) L-ornithine;

f) D-ornithine;

g) L-homoarginine; and

h) D-homoarginine,

wherein Y^2 is either

a) an OH group of the C-terminal amino acid having a terminal carboxylic acid group or

b) an amino group where the carboxylic acid group in the C-terminal amino acid is replaced by an amide group or

c) a hydrogen where the carboxylic acid group in the C-terminal amino acid is replaced by an aldehyde group or

d) 7-amido-4-methylcoumarin combined through the carboxylic acid group or

e) para-nitroanilide combined through the carboxylic acid group or

f) is replaced by a connecting chain containing 1 to 35 atoms,

or wherein the compound is a molecule shortened at the C-terminus and/or at the N-terminus by one amino acid, and pharmaceutically acceptable salts thereof.

178. (New) A pharmaceutical composition comprising an effective thrombus-preventing amount of a compound according to claim 177 and a pharmaceutically acceptable carrier.

{W:\02198\0200973us0\00601640.DOC [REDACTED] }

=> b reg

FILE 'REGISTRY' ENTERED AT 13:44:37 ON 13 JAN 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2006 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 12 JAN 2006 HIGHEST RN 871870-74-5

DICTIONARY FILE UPDATES: 12 JAN 2006 HIGHEST RN 871870-74-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

```
*****
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*
*****
```

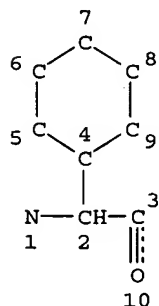
Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> d que sta l12

L11 STR



NODE ATTRIBUTES:

CONNECT IS E2 RC AT 1

CONNECT IS E3 RC AT 3

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 10

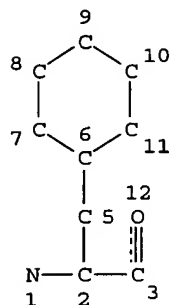
STEREO ATTRIBUTES: NONE

L12 5852 SEA FILE=REGISTRY CSS FUL L11

100.0% PROCESSED 46604 ITERATIONS
SEARCH TIME: 00.00.01

5852 ANSWERS

=> d que sta 120
L18 STR



NODE ATTRIBUTES:
CONNECT IS E2 RC AT 1
CONNECT IS E3 RC AT 3
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

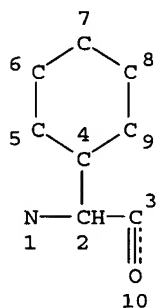
GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE
L20 9238 SEA FILE=REGISTRY CSS FUL L18

100.0% PROCESSED 60539 ITERATIONS
SEARCH TIME: 00.00.01

9238 ANSWERS

=> d que sta 121
L11 STR



NODE ATTRIBUTES:
CONNECT IS E2 RC AT 1
CONNECT IS E3 RC AT 3
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

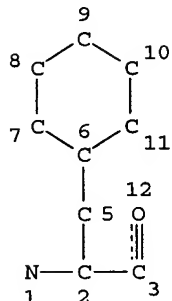
GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L12 5852 SEA FILE=REGISTRY CSS FUL L11

L16 235539 SEA FILE=REGISTRY ABB=ON PLU=ON ([VALI'NLE'NQSTYRK'ORN'] [VALI'NLE'STYP'CIT'RK'ORN'HEDW'CHA'] 'CHA' [P'AZE'] [YF] [RK'ORN''HAR'])
| ([VALI'NLE'NQSTYRK'ORN']. {2} [P'AZE'] [YF] [RK'ORN''HAR']) /SQSP

L18 STR



NODE ATTRIBUTES:

CONNECT IS E2 RC AT 1

CONNECT IS E3 RC AT 3

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L20 9238 SEA FILE=REGISTRY CSS FUL L18

L21 18 SEA FILE=REGISTRY ABB=ON PLU=ON (L12 OR L20) AND L16

=> b hcap

FILE 'HCAPLUS' ENTERED AT 13:44:54 ON 13 JAN 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 13 Jan 2006 VOL 144 ISS 4

FILE LAST UPDATED: 12 Jan 2006 (20060112/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d bib abs hitstr l26 tot

L26 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:605408 HCAPLUS

DN 141:134085

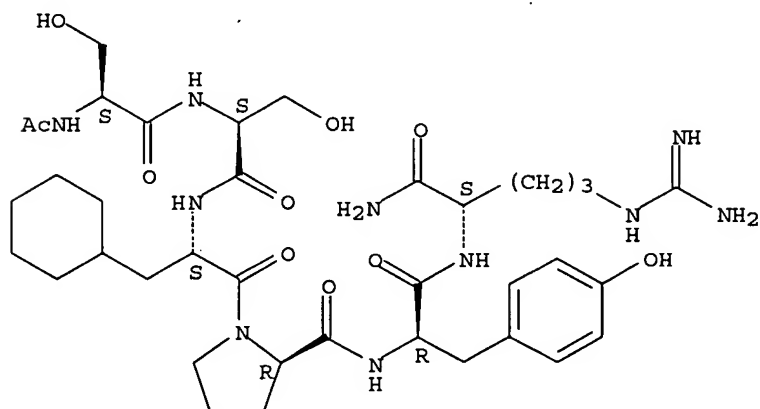
TI Peptidic compound thrombin inhibitors, and their diagnostic and

therapeutic use

IN Thurk, Marcel; Schwienhorst, Andreas
 PA CPI Creative Pharma International GmbH, Germany
 SO Ger. Offen., 13 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE--10301255	A1	20040729	2003DE-1001255	20030115
	CA---2513466	AA	20040729	2004CA-2513466	20040115
	WO2004063212	A2	20040729	2004WO-EP00256	20040115
	WO2004063212	A3	20050324		
	W: AE, AE, AG, AL, AL, AM, AM, AM, AT, AT, AU, AU, AZ, AZ, BA, BB, BG, BG, BR, BR, BW, BY, BY, BZ, BZ, CA, CH, CN, CO, CO, CR, CR, CU, CU, CZ, CZ, DK, DK, DM, DZ, EC, EC, EE, EE, EG, ES, ES, FI, FI, GB, GD, GE, GE, GH, GH, GH, GM, HR, HR, HU, HU, ID, IL, IN, IS, JP, JP, KE, KE, KG, KG, KP, KP, KP, KR, KR, KZ, KZ, KZ, LC, LK, LR, LS, LS, LT, LU, LV, MA, MD, MD, MG, MK, MN, MW, MX, MX, MZ, MZ, NA				
	EP---1583587	A2	20051012	2004EP-0702312	20040115
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRAI	2003DE-1001255	A	20030115		
	2004WO-EP00256	W	20040115		
OS	MARPAT 141:134085				
AB	The invention discloses biol. active peptide compds. (Markush included) which interact with thrombin and inhibit it.				
IT	501937-44-6 501937-44-6D, salts 501937-46-8 501937-46-8D, salts 501937-48-0 501937-48-0D, salts 501937-49-1 501937-49-1D, salts 501937-51-5 501937-51-5D, salts 501937-55-9 501937-55-9D, salts 501937-57-1 501937-57-1D, salts 501937-60-6 501937-60-6D, salts 501937-62-8 501937-62-8D, salts				
	RL: DGN (Diagnostic use); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (peptidic compound thrombin inhibitors, and diagnostic and therapeutic use)				
RN	501937-44-6 HCAPLUS				
CN	L-Argininamide, N-acetyl-L-seryl-L-seryl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)				

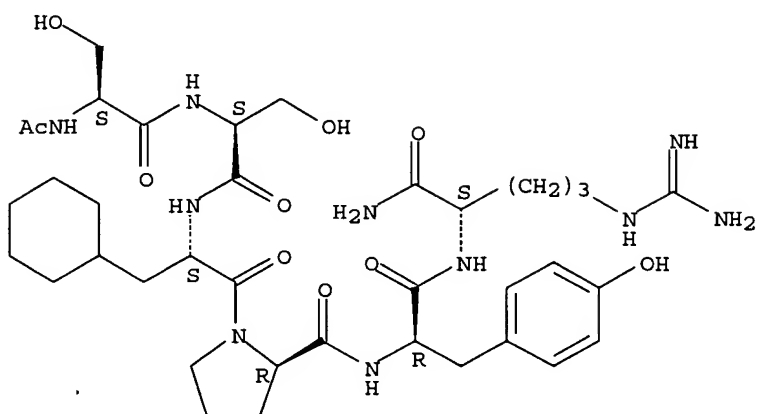
Absolute stereochemistry.



RN 501937-44-6 HCAPLUS
 CN L-Argininamide, N-acetyl-L-seryl-L-seryl-3-cyclohexyl-L-alanyl-D-prolyl-D-

tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

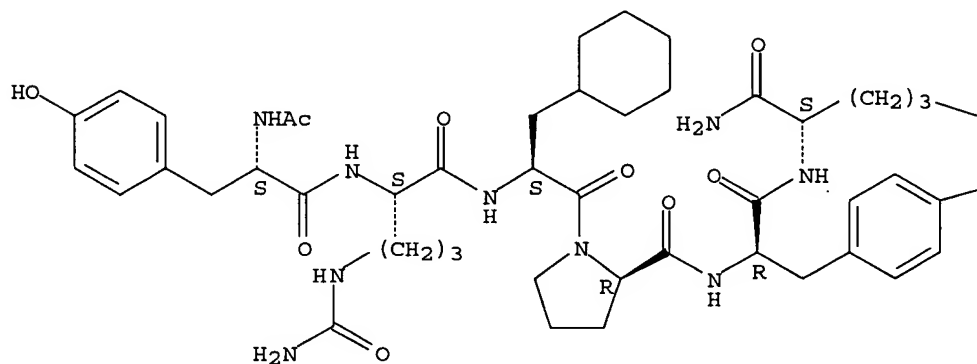


RN 501937-46-8 HCAPLUS

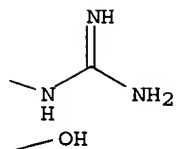
CN L-Argininamide, N-acetyl-L-tyrosyl-N5-(aminocarbonyl)-L-ornithyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

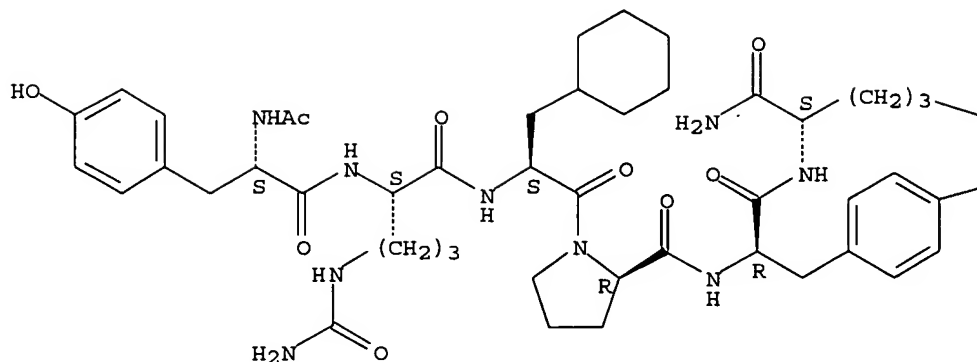


RN 501937-46-8 HCAPLUS

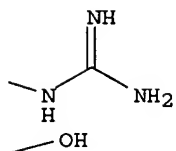
CN L-Argininamide, N-acetyl-L-tyrosyl-N5-(aminocarbonyl)-L-ornithyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



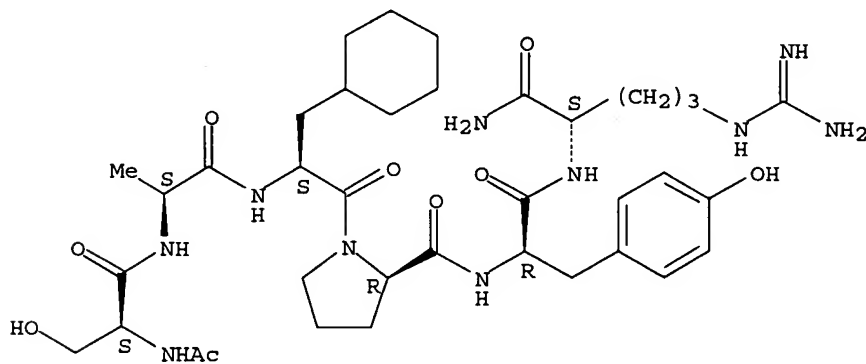
PAGE 1-B



RN 501937-48-0 HCAPLUS

CN L-Argininamide, N-acetyl-L-seryl-L-alanyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

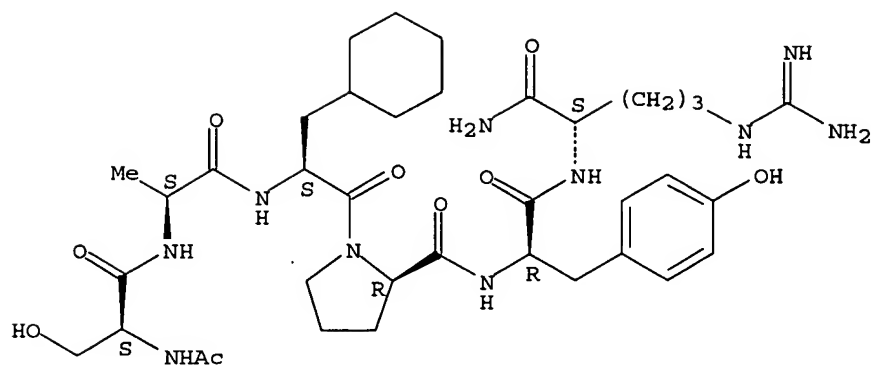
Absolute stereochemistry.



RN 501937-48-0 HCAPLUS

CN L-Argininamide, N-acetyl-L-seryl-L-alanyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

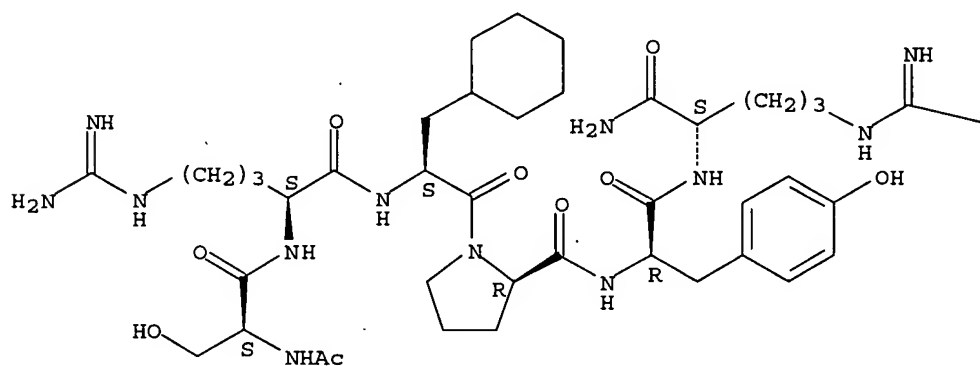


RN 501937-49-1 HCAPLUS

CN L-Argininamide, N-acetyl-L-seryl-L-arginyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

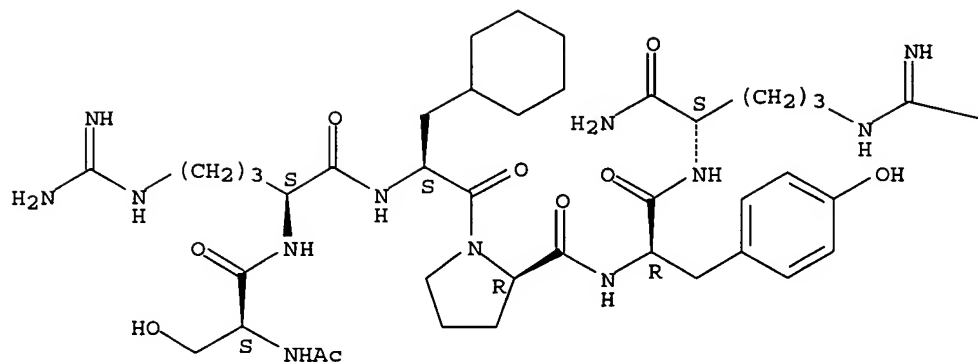
NH₂

RN 501937-49-1 HCAPLUS

CN L-Argininamide, N-acetyl-L-seryl-L-arginyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



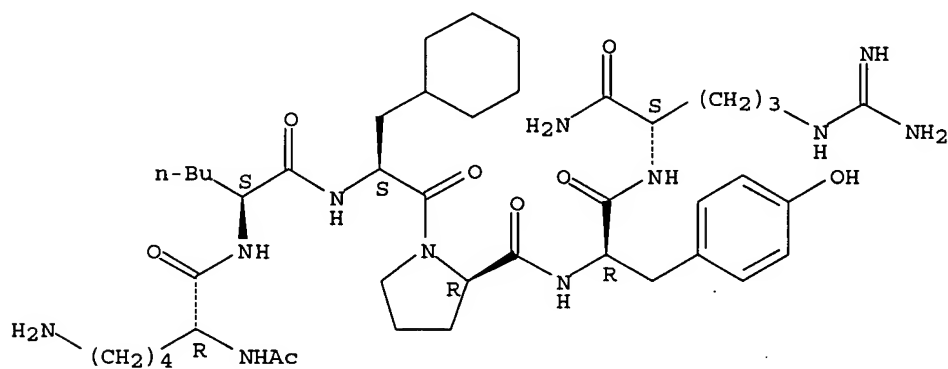
PAGE 1-B

—NH₂

RN 501937-51-5 HCAPLUS

CN L-Argininamide, N2-acetyl-D-lysyl-L-norleucyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

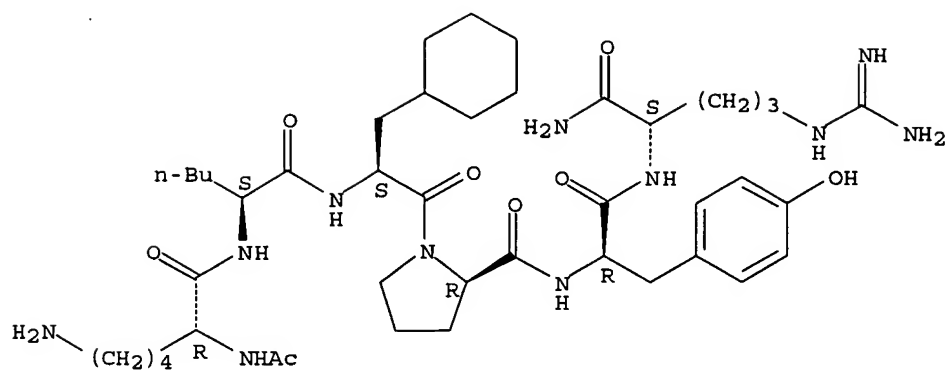
Absolute stereochemistry.



RN 501937-51-5 HCAPLUS

CN L-Argininamide, N2-acetyl-D-lysyl-L-norleucyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

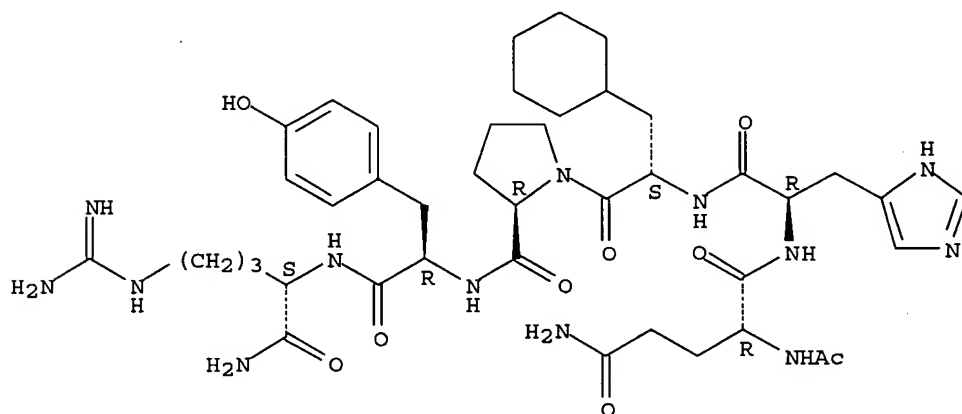
Absolute stereochemistry.



RN 501937-55-9 HCAPLUS

CN L-Argininamide, N2-acetyl-D-glutaminyl-D-histidyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

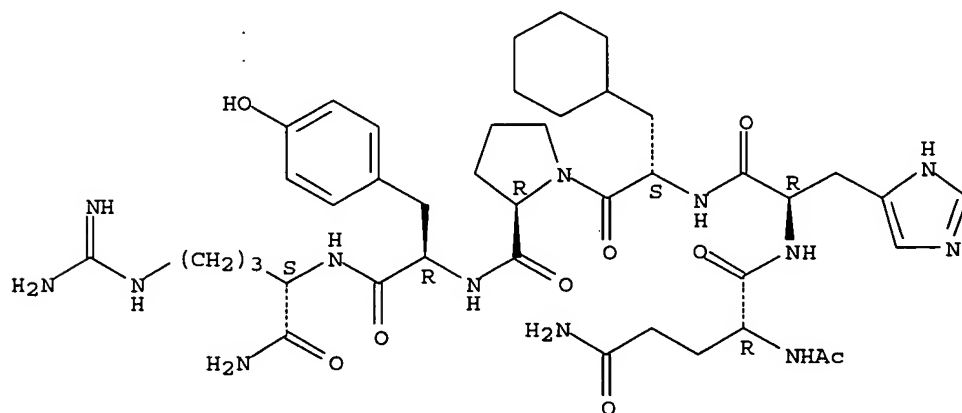
Absolute stereochemistry.



RN 501937-55-9 HCAPLUS

CN L-Argininamide, N2-acetyl-D-glutaminyl-D-histidyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

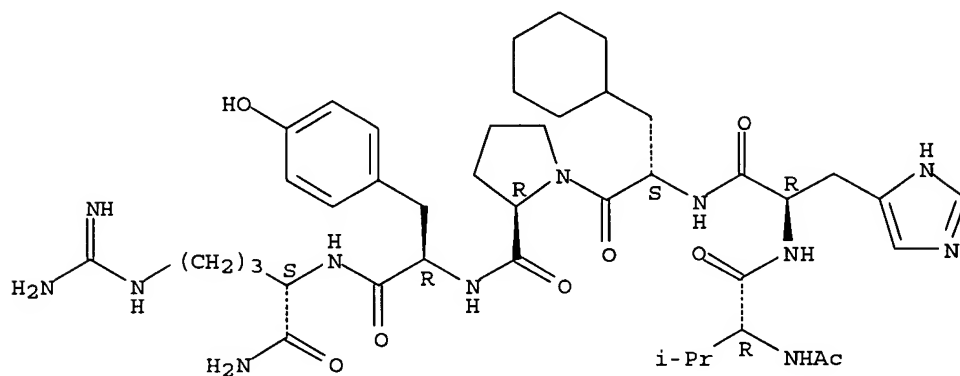
Absolute stereochemistry.



RN 501937-57-1 HCAPLUS

CN L-Argininamide, N-acetyl-D-valyl-D-histidyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

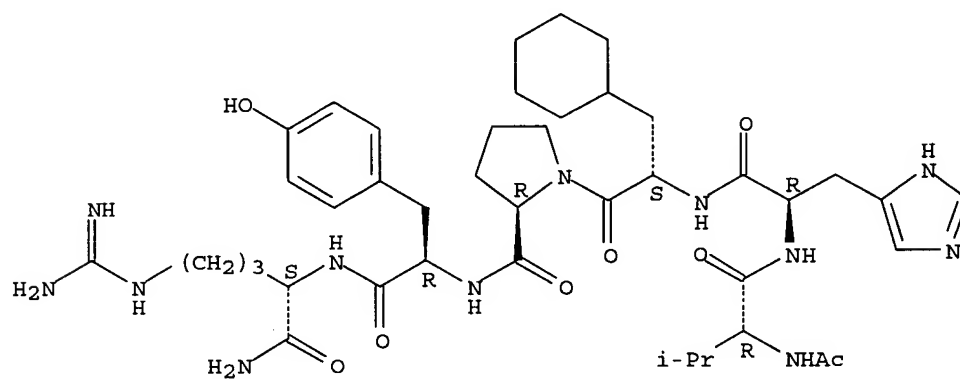
Absolute stereochemistry.



RN 501937-57-1 HCAPLUS

CN L-Argininamide, N-acetyl-D-valyl-D-histidyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

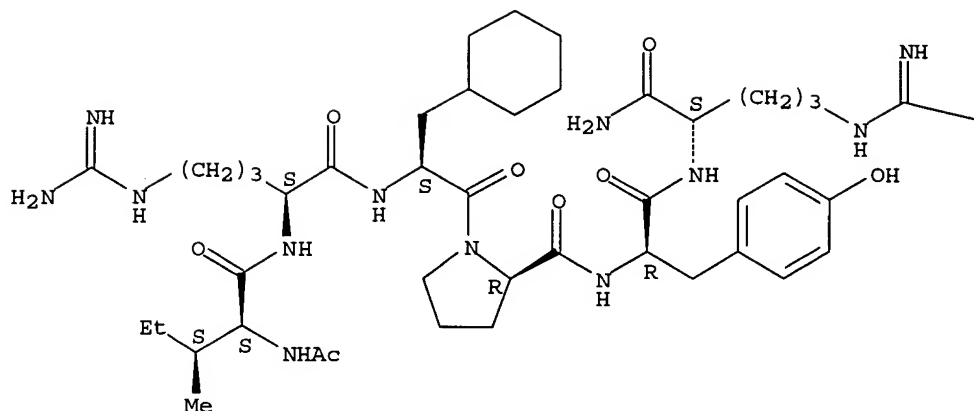


RN 501937-60-6 HCAPLUS

CN L-Argininamide, N-acetyl-L-isoleucyl-L-arginyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

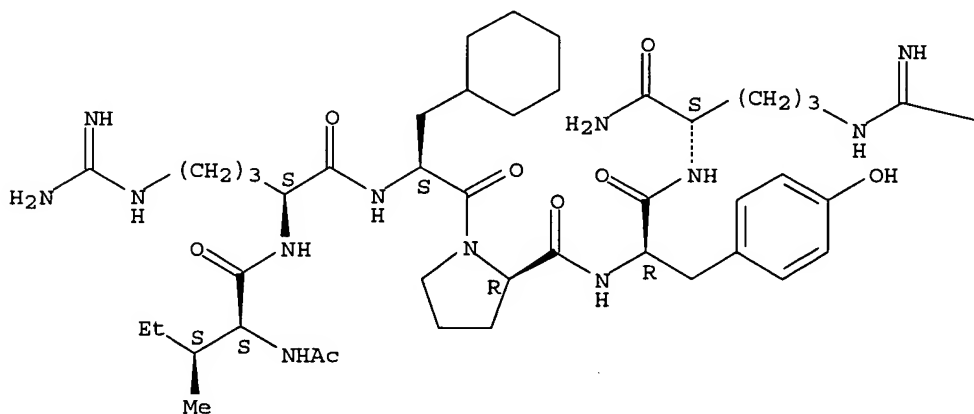
—NH₂

RN 501937-60-6 HCAPLUS

CN L-Argininamide, N-acetyl-L-isoleucyl-L-arginyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

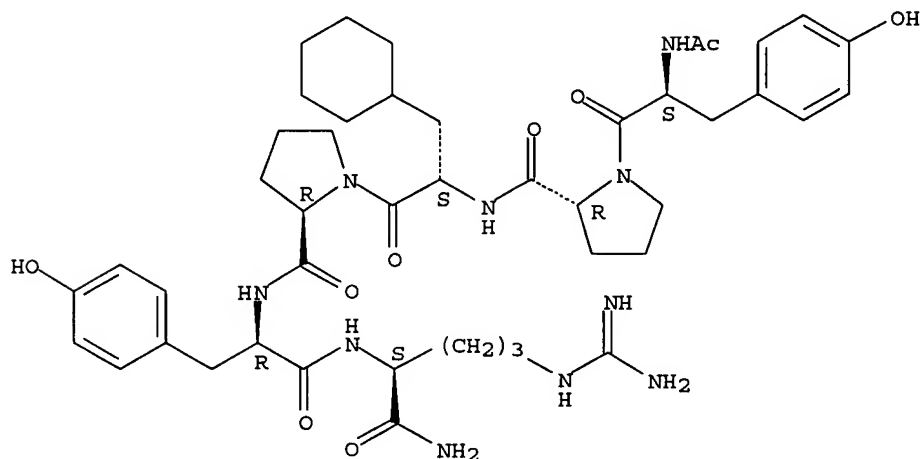


PAGE 1-B

—NH₂

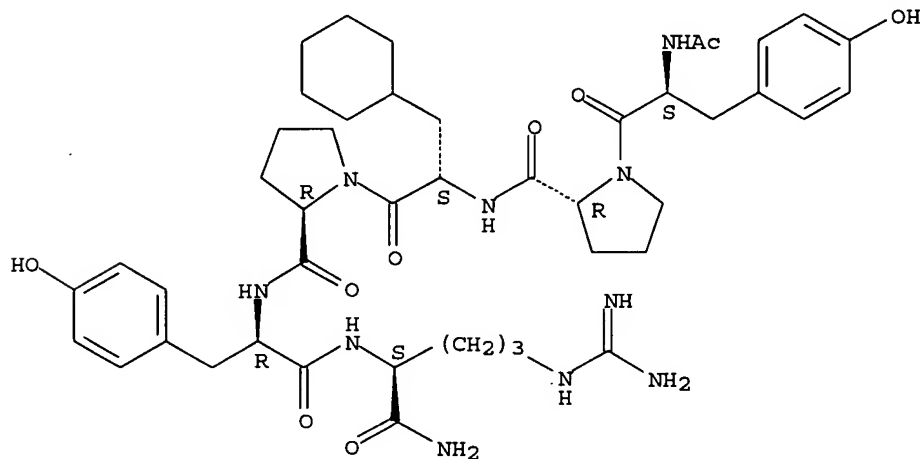
RN 501937-62-8 HCAPLUS
 CN L-Argininamide, N-acetyl-L-tyrosyl-D-prolyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 501937-62-8 HCAPLUS
 CN L-Argininamide, N-acetyl-L-tyrosyl-D-prolyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L26 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 2003:221711 HCAPLUS
 DN 138:238448
 TI Synthesis of peptides for use as thrombin inhibitors for therapeutic use
 IN Thurk, Marcel
 PA Novel Science International Gmbh, Germany
 SO PCT Int. Appl., 105 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

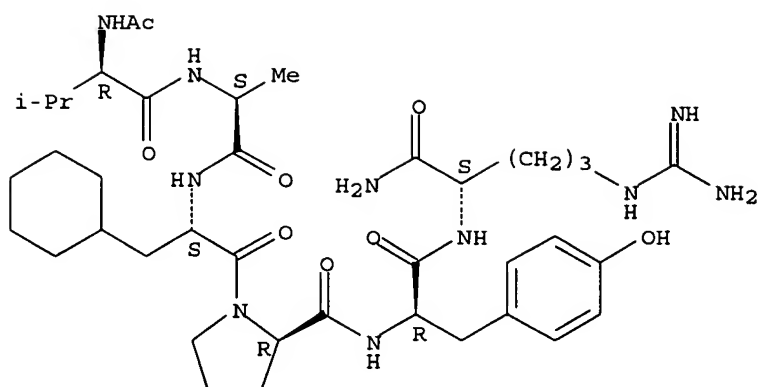
noble jarrell 13/01/2006

```

-----
PI WO2003022873 A1 20030320 2002WO-EP10137 20020910 <--
WO2003022873 C2 20031211
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM,
HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL,
PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF,
CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
DE--10146632 A1 20050203 2001DE-1046632 20010921 <--
DE--10156995 A1 20050210 2001DE-1056995 20011121 <--
DE--10200666 A1 20050630 2002DE-1000666 20020110 <--
CA---2460300 AA 20030320 2002CA-2460300 20020910 <--
EP---1425296 A1 20040609 2002EP-0797977 20020910 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
US2005026843 A1 20050203 2004US-0798218 20040310 <--
PRAI 2001DE-1044340 A 20010910 <--
2001DE-1046632 A 20010921 <--
2001DE-1049678 A 20011009 <--
2001DE-1056995 A 20011121 <--
2002DE-1000666 A 20020110 <--
2002WO-EP10137 W 20020910 <--
OS MARPAT 138:238448
AB The invention relates to biol. active mols., interacting with thrombin and
inhibiting the same. The invention particularly relates to mols. of
general formula Y-(NH-X-C=O)-(NH-X1-C=O)-(NH-X2-C=O)-(NH-X3-C=O)-(NH-X4-
C=O)-(NH-X5-C=O)-Y1, [Y,Y1 = protecting groups; X, X1-5 = D- or L-natural
or synthetic amino acids] or N-or C-terminal shortened variants of said
comps. and the use thereof for the production of medicaments (no data).
Thus, solid-phase peptide synthesis was used to prepare H3CC(O)-L-Arg-L-Cha-
D-Pro-D-Tyr-L-Arg-NH2 (Cha = cyclohexylalanine) (I) (no data). In in
vitro thrombin inhibition testing, I had an anti-amidase activity of 98%
at 10µM.
IT 501937-40-2P 501937-41-3P 501937-44-6P
501937-45-7P 501937-46-8P 501937-47-9P
501937-48-0P 501937-49-1P 501937-50-4P
501937-51-5P 501937-53-7P 501937-55-9P
501937-57-1P 501937-60-6P 501937-62-8P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
(preparation of peptides for use as thrombin inhibitors for therapeutic use)
RN 501937-40-2 HCAPLUS
CN L-Argininamide, N-acetyl-D-valyl-L-alanyl-3-cyclohexyl-L-alanyl-D-prolyl-D-
tyrosyl- (9CI) (CA INDEX NAME)

```

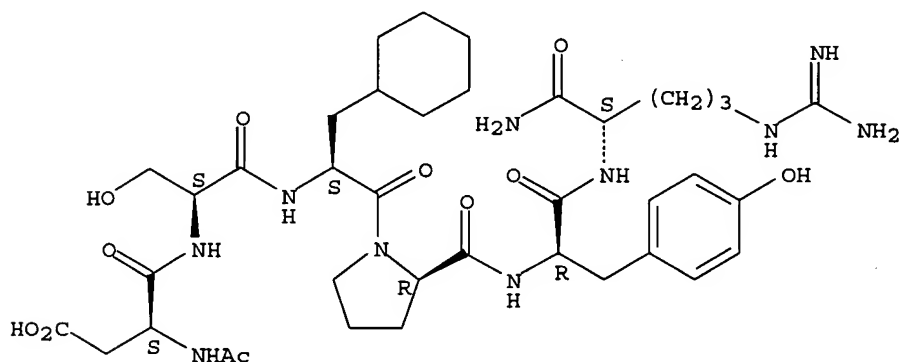
Absolute stereochemistry.



RN 501937-41-3 HCAPLUS

CN L-Argininamide, N-acetyl-L-α-aspartyl-L-seryl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

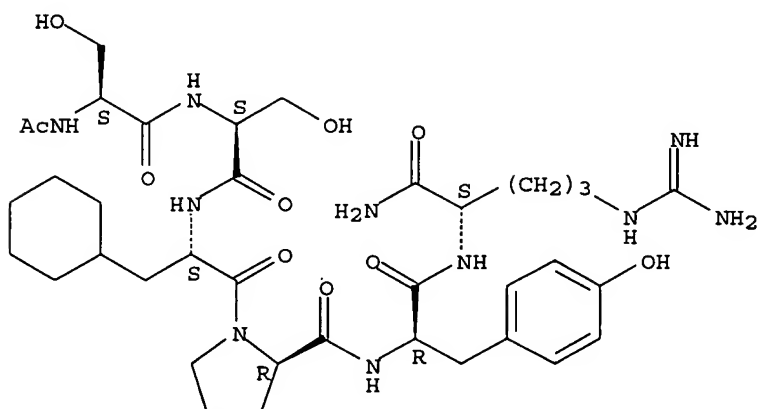
Absolute stereochemistry.



RN 501937-44-6 HCAPLUS

CN L-Argininamide, N-acetyl-L-seryl-L-seryl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



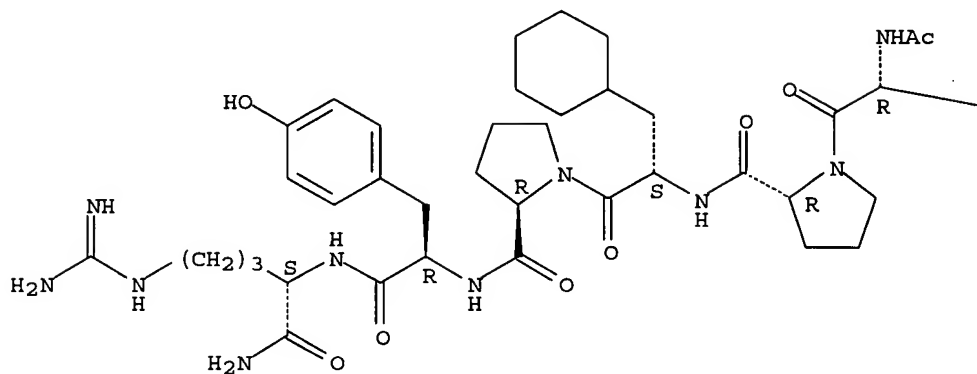
RN 501937-45-7 HCAPLUS

CN L-Argininamide, N2-acetyl-D-lysyl-D-prolyl-3-cyclohexyl-L-alanyl-D-prolyl-

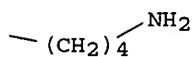
D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

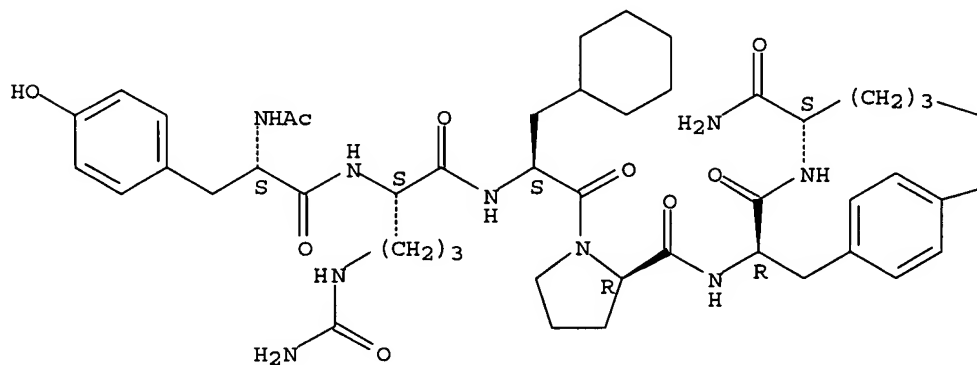


RN 501937-46-8 HCAPLUS

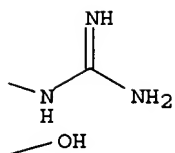
CN L-Argininamide, N-acetyl-L-tyrosyl-N5-(aminocarbonyl)-L-ornithyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



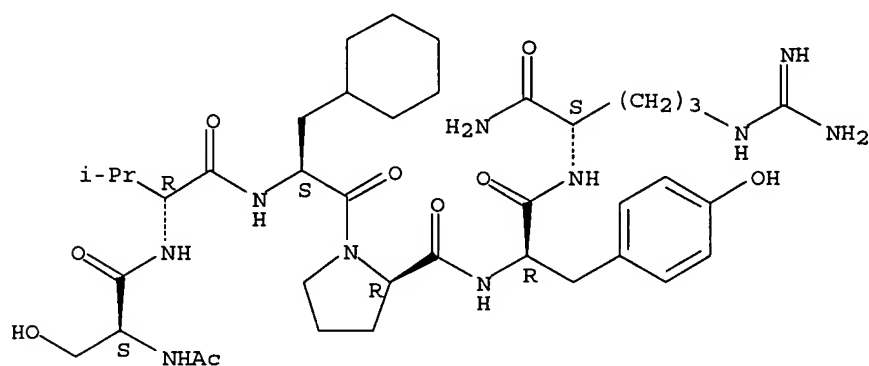
PAGE 1-B



RN 501937-47-9 HCAPLUS

CN L-Argininamide, N-acetyl-L-seryl-D-valyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

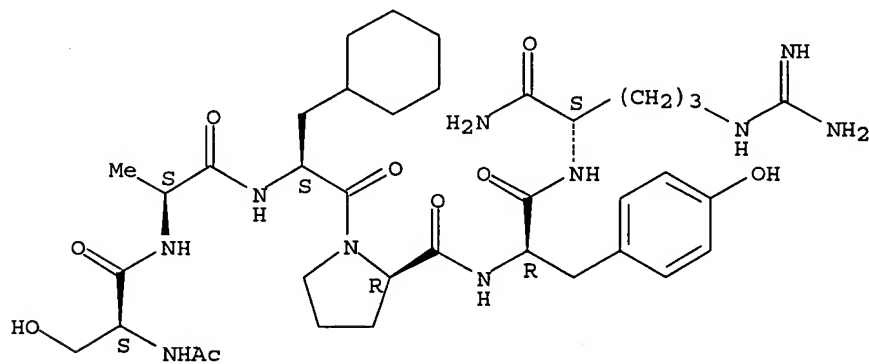
Absolute stereochemistry.



RN 501937-48-0 HCAPLUS

CN L-Argininamide, N-acetyl-L-seryl-L-alanyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

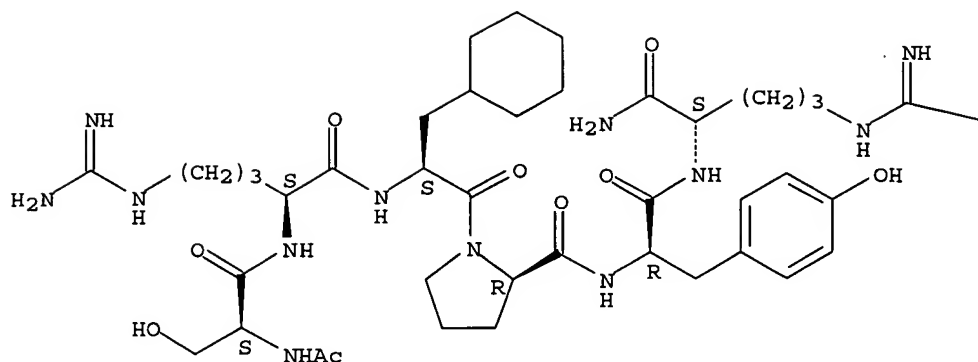


RN 501937-49-1 HCAPLUS

CN L-Argininamide, N-acetyl-L-seryl-L-arginyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



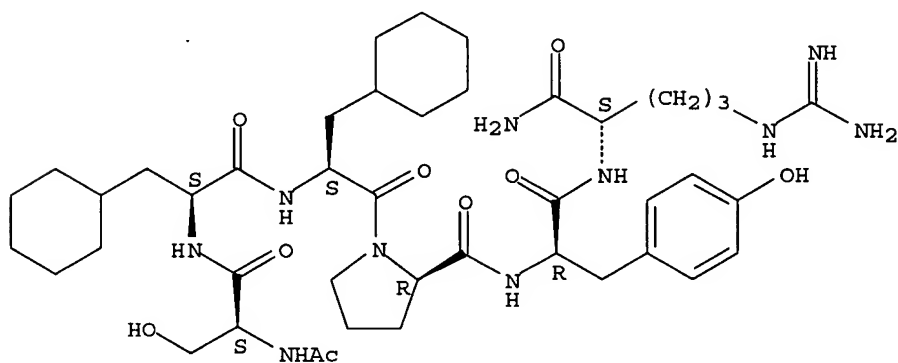
PAGE 1-B

—NH₂

RN 501937-50-4 HCAPLUS

CN L-Argininamide, N-acetyl-L-seryl-3-cyclohexyl-L-alanyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

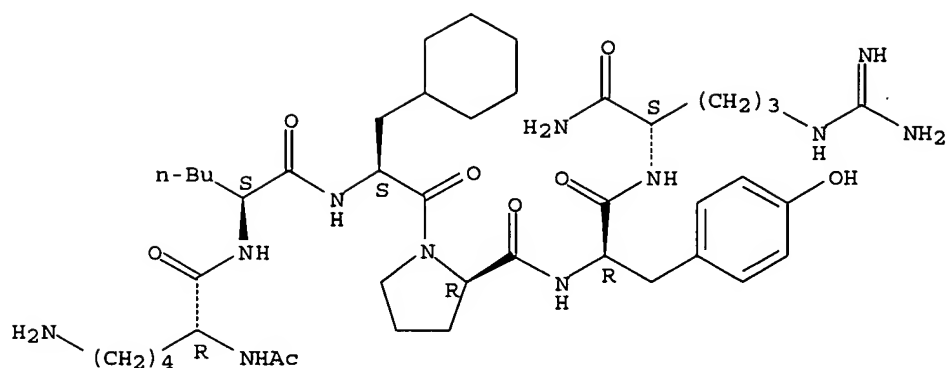
Absolute stereochemistry.



RN 501937-51-5 HCAPLUS

CN L-Argininamide, N2-acetyl-D-lysyl-L-norleucyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

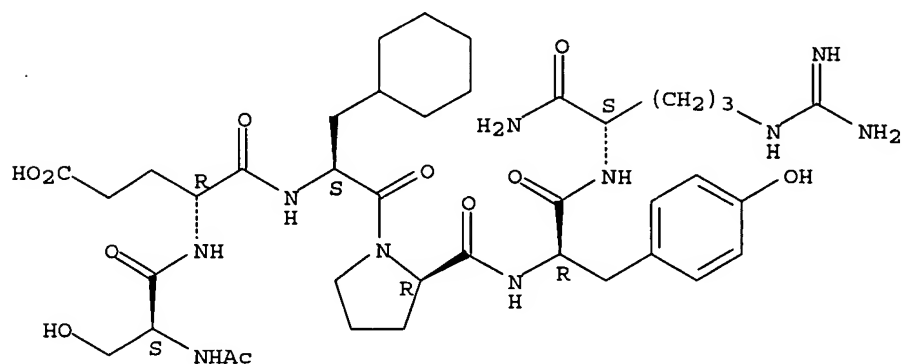
Absolute stereochemistry.



RN 501937-53-7 HCAPLUS

CN L-Argininamide, N-acetyl-L-seryl-D-α-glutamyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

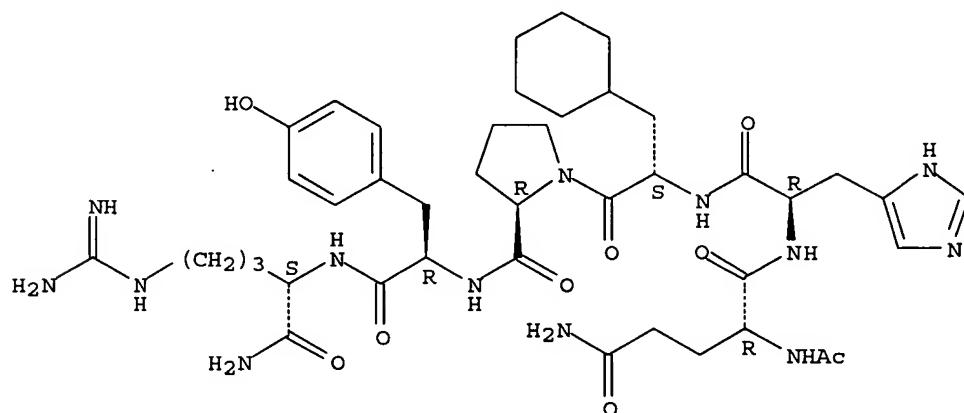
Absolute stereochemistry.



RN 501937-55-9 HCAPLUS

CN L-Argininamide, N2-acetyl-D-glutamyl-D-histidyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

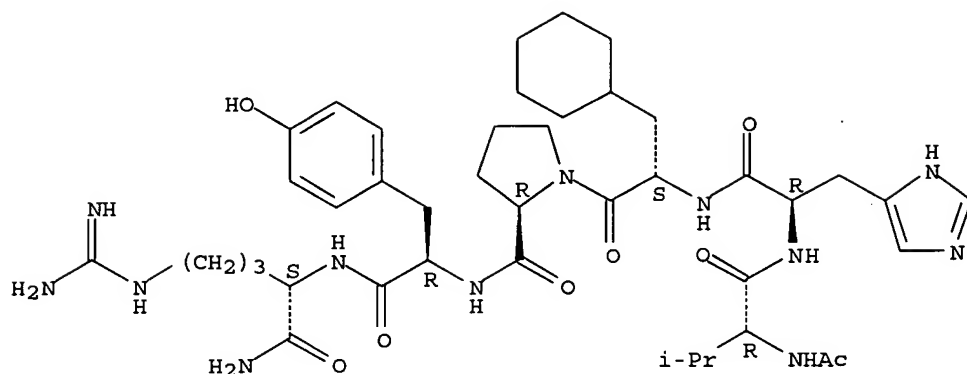
Absolute stereochemistry.



RN 501937-57-1 HCAPLUS

CN L-Argininamide, N-acetyl-D-valyl-D-histidyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

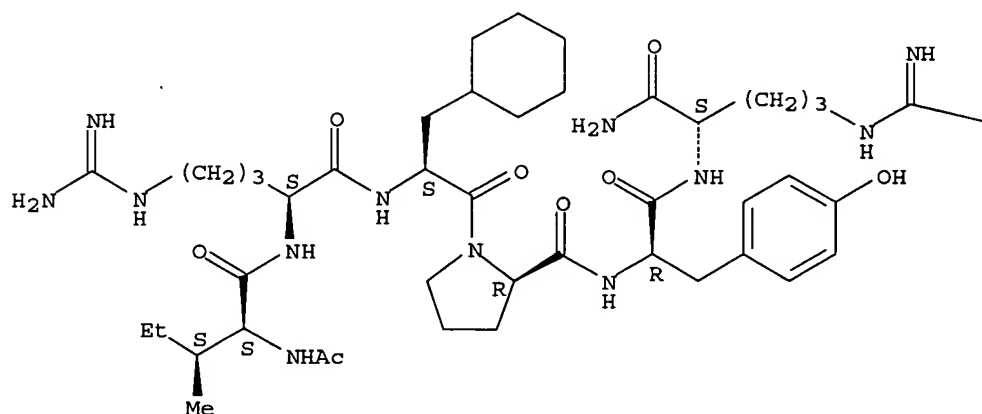


RN 501937-60-6 HCAPLUS

CN L-Argininamide, N-acetyl-L-isoleucyl-L-arginyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



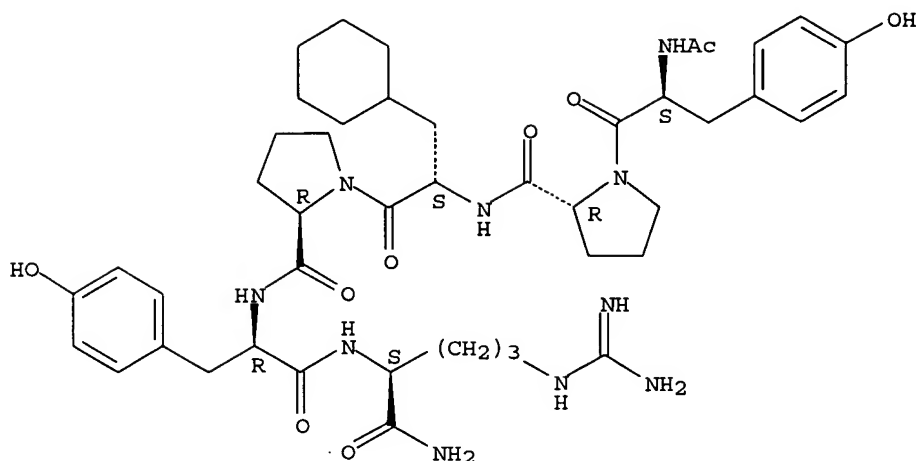
PAGE 1-B

—NH₂

RN 501937-62-8 HCAPLUS

CN L-Argininamide, N-acetyl-L-tyrosyl-D-prolyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

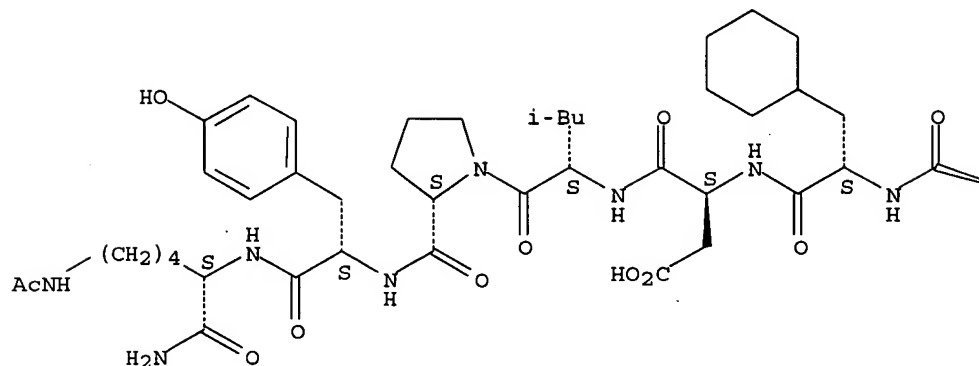


L26	ANSWER 3 OF 4	HCAPLUS	COPYRIGHT 2006 ACS on STN
AN	2000:675049	HCAPLUS	
DN	134:27426		
TI	Optimization of the P'-Region of Peptide Inhibitors of Hepatitis C Virus NS3/4A Protease		
AU	Ingallinella, Paolo; Bianchi, Elisabetta; Ingenito, Raffaele; Koch, Uwe; Steinkuehler, Christian; Altamura, Sergio; Pessi, Antonello		
CS	IRBM P. Angeletti, Pomezia, 00040, Italy		
SO	Biochemistry (2000), 39(42), 12898-12906		
	CODEN: BICHAW; ISSN: 0006-2960		
PB	American Chemical Society		
DT	Journal		
LA	English		
AB	<p>Infection by Hepatitis C Virus (HCV) leads to a slowly progressing disease that over two decades can lead to liver cirrhosis or liver cancer. Currently, one of the most promising approaches to anti-HCV therapy is the development of inhibitors of the NS3/4A protease, which is essential for maturation of the viral polyprotein. Several substrate-derived inhibitors of NS3/4A have been described, all taking advantage of binding to the S subsite of the enzyme. Inspection of the S' subsite of NS3/4A shows binding pockets which might be exploited for inhibitor binding, but due to the fact that ground-state binding to the S' subsite is not used by the substrate, this does not represent a suitable starting point. The authors have now optimized S'-binding in the context of noncleavable decapeptides spanning P6-P4'. Binding was sequentially increased by introduction of the previously optimized P-region [Ingallinella et al. (1998) Biochem. 37, 8906-8914], change of the P4' residue, and combinatorial optimization of positions P2'-P3'. The overall process led to an increase in binding of more than 3 orders of magnitude, with the best decapeptide showing IC50 < 200 pM. The binding mode of the decapeptides described in the present work shares features with the binding mode of the natural substrates, together with novel interactions within the S' subsite. Therefore, these peptides may represent an entry point for a novel class of NS3 inhibitors.</p>		
IT	<p>311348-38-6</p> <p>RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)</p> <p>(optimization of P'-region of peptide inhibitors of hepatitis C virus NS3/4A protease in relation to antiviral therapy)</p>		
RN	311348-38-6 HCAPLUS		
CN	<p>L-Lysinamide, N-acetyl-L-α-aspartyl-D-α-glutamyl-L-leucyl-L-isoleucyl-3-cyclohexyl-L-alanyl-L-cysteinyl-L-prolyl-3-cyclohexyl-L-alanyl-</p>		

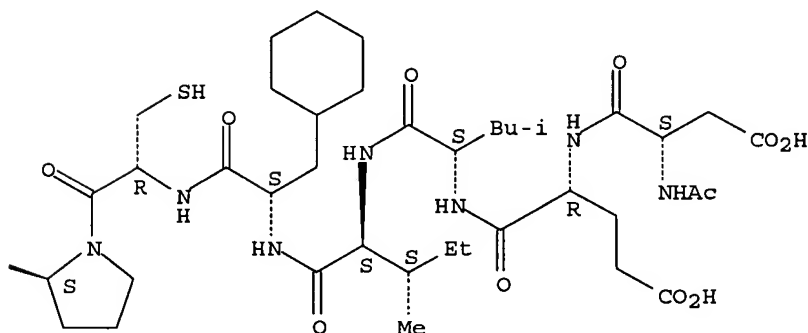
L- α -aspartyl-L-leucyl-L-prolyl-L-tyrosyl-N6-acetyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

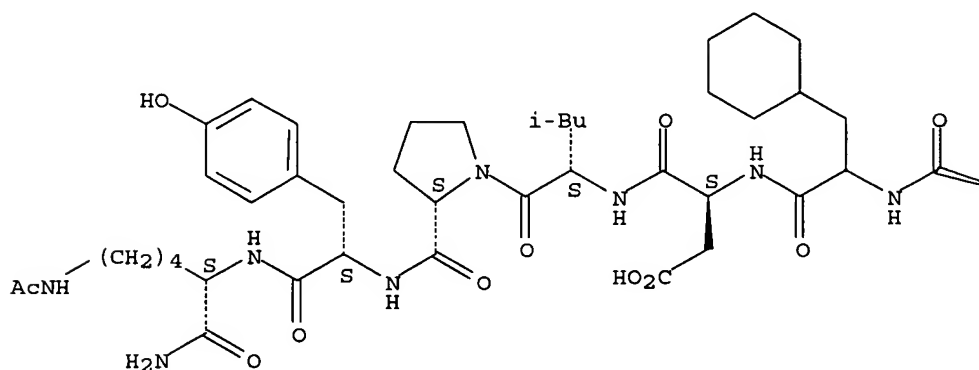
L26 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:368424 HCAPLUS
DN 133:12727
TI Peptidic pharmaceutical compounds for the inhibition of hepatitis C virus
NS3 protease
IN Pessi, Antonello; Ingallinella, Paola; Bianchi, Elisabetta
PA Istituto di Ricerche di Biologia Molecolare p Angeletti Spa, Italy
SO PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO2000031129	A1	20000602	1999WO-EP09207	19991124
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,				

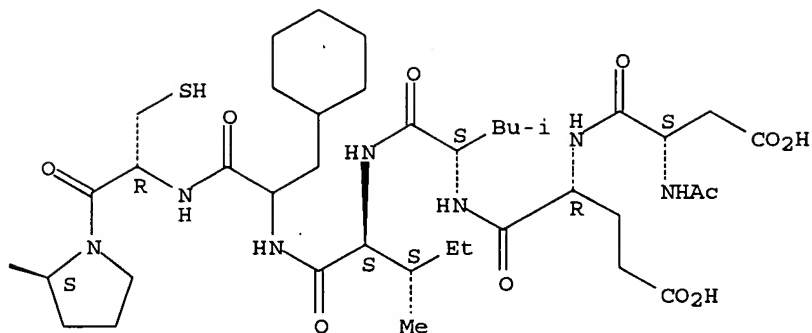
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
 MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
 SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
 DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
 CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
 CA---2352493 AA 20000602 1999CA-2352493 19991124
 EP---1144446 A1 20011017 1999EP-0972641 19991124
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO
 AU----764589 B2 20030821 2000AU-0013871 19991124
 PRAI 1998GB-0025946 A 19981126
 1999WO-EP09207 W 19991124
 OS MARPAT 133:12727
 AB Peptidic inhibitors of hepatitis C virus NS3 protease are disclosed which
 are based on the P and P' regions of the natural substrate. The P' part
 of the inhibitor is optimized to achieve maximum binding energy through
 interaction with the S' region of the enzyme. By selecting amino acids
 such that the inhibitor is substantially not cleavable by the NS3
 protease, inhibitors having potency in the low nanomolar to sub-nanomolar
 range can be achieved.
 IT 272435-79-7P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
 (Uses)
 (peptidic pharmaceutical compds. for inhibition of hepatitis C virus
 NS3 protease)
 RN 272435-79-7 HCAPLUS
 CN L-Lysinamide, N-acetyl-L- α -aspartyl-D- α -glutamyl-L-leucyl-L-
 isoleucyl-3-cyclohexylalanyl-L-cysteinyl-L-prolyl-3-cyclohexylalanyl-L-
 α -aspartyl-L-leucyl-L-prolyl-L-tyrosyl-N6-acetyl- (9CI) (CA INDEX
 NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



IT 272435-97-9 272784-99-3

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

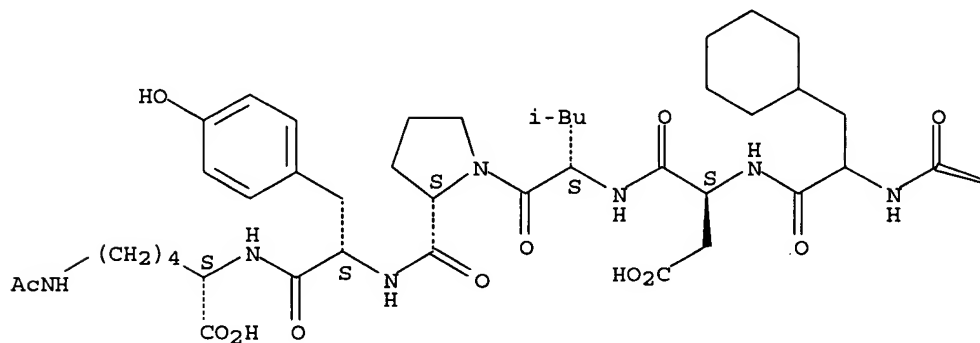
(peptidic pharmaceutical compds. for inhibition of hepatitis C virus NS3 protease)

RN 272435-97-9 HCAPLUS

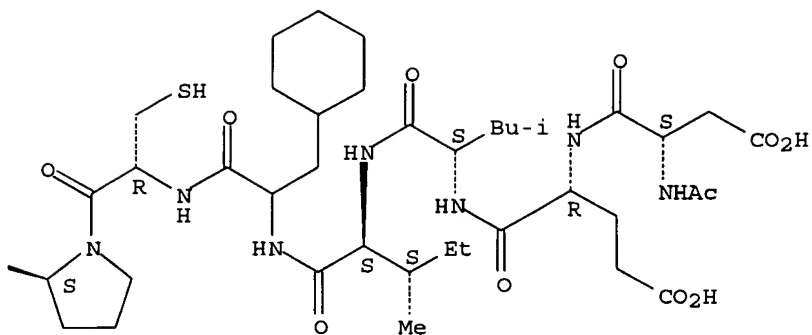
CN L-Lysine, N-acetyl-L- α -aspartyl-D- α -glutamyl-L-leucyl-L-isoleucyl-3-cyclohexylalanyl-L-cysteinyl-L-prolyl-3-cyclohexylalanyl-L- α -aspartyl-L-leucyl-L-prolyl-L-tyrosyl-N6-acetyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

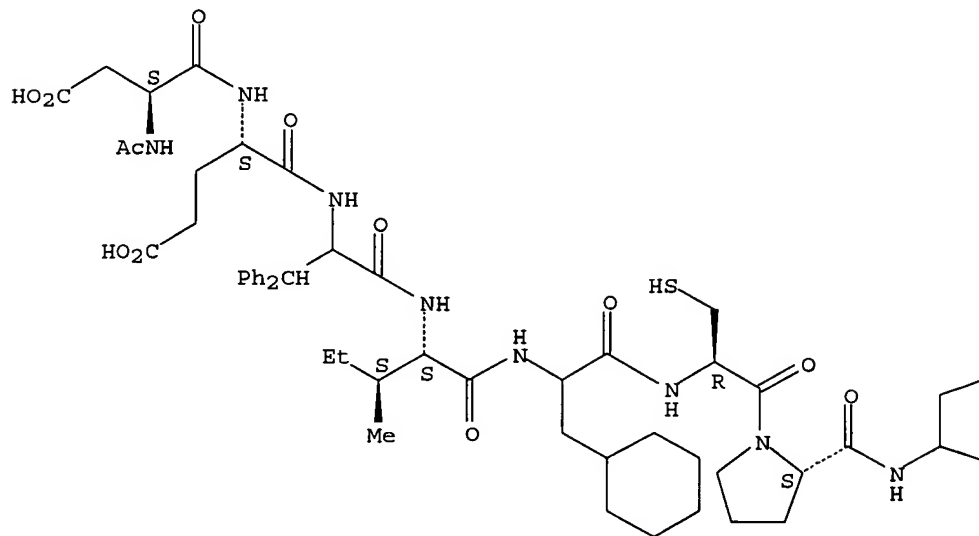


RN 272784-99-3 HCAPLUS

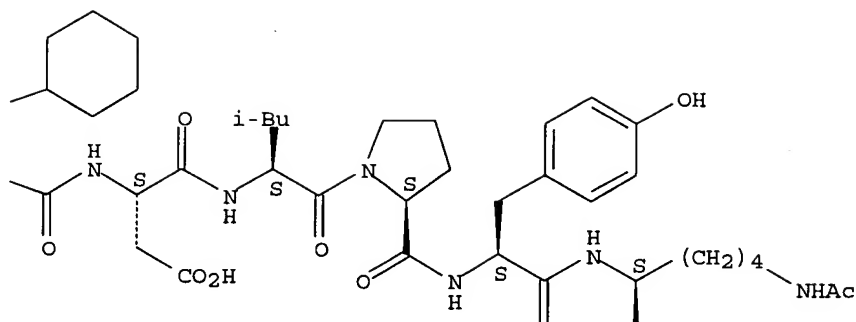
CN L-Lysine, N-acetyl-L- α -aspartyl-L- α -glutamyl- β -phenylphenylalanyl-L-isoleucyl-3-cyclohexylalanyl-L-cysteinyl-L-prolyl-3-cyclohexylalanyl-L- α -aspartyl-L-leucyl-L-prolyl-L-tyrosyl-N6-acetyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



PAGE 2-B



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> b uspatall

FILE 'USPATFULL' ENTERED AT 13:45:25 ON 13 JAN 2006

CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 13:45:25 ON 13 JAN 2006

CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

=> d bib abs hitstr 128

L28 ANSWER 1 OF 1 USPATFULL on STN

AN 2005:31406 USPATFULL

TI Organic compounds with biological activity as thrombin inhibitors and use thereof

IN Thurk, Marcel, Bovenden, GERMANY, FEDERAL REPUBLIC OF

PA Novel Science International GMBH, Gottingen, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)

PI US2005026843 A1 20050203

AI 2004US-0798218 A1 20040310 (10)

RLI Continuation of Ser. No. 2002WO-EP10137, filed on 10 Sep 2002, UNKNOWN

PRAI 2001DE-0144340 20010910

2001DE-0146632 20010921

2001DE-0149678 20011009

2001DE-0156995 20011121

DE 2002-10200666 20020110

DT Utility

FS APPLICATION

LREP DARBY & DARBY P.C., P. O. BOX 5257, NEW YORK, NY, 10150-5257

noble jarrell 13/01/2006

CLMN Number of Claims: 45
 ECL Exemplary Claim: 1
 DRWN No Drawings
 LN.CNT 1928

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to biologically active molecules, interacting with thrombin and inhibiting the same. The invention particularly relates to molecules of general formula (I): $\text{Y}^{\text{sup.1}} - (\text{NH} - \text{X}^{\text{sup.1}} - \text{C}=\text{O}) - (\text{NH} - \text{X}^{\text{sup.2}} - \text{C}^{\text{dbd.C}}) - (\text{NH} - \text{X}^{\text{sup.3}} - \text{C}=\text{O}) - (\text{NH} - \text{X}^{\text{sup.4}} - \text{C}=\text{O}) - (\text{NH} - \text{X}^{\text{sup.5}} - \text{C}=\text{O}) - (\text{NH} - \text{X}^{\text{sup.6}} - \text{C}^{\text{dbd.O}}) - \text{Y}^{\text{sup.2}}$, in which $\text{Y}^{\text{sup.1}}$, $\text{Y}^{\text{sup.2}}$, and $\text{X}^{\text{sup.1-6}}$ have the meanings given in the description, N.-or C-terminal shortened variants of said compounds and the use thereof for the production of medicaments.

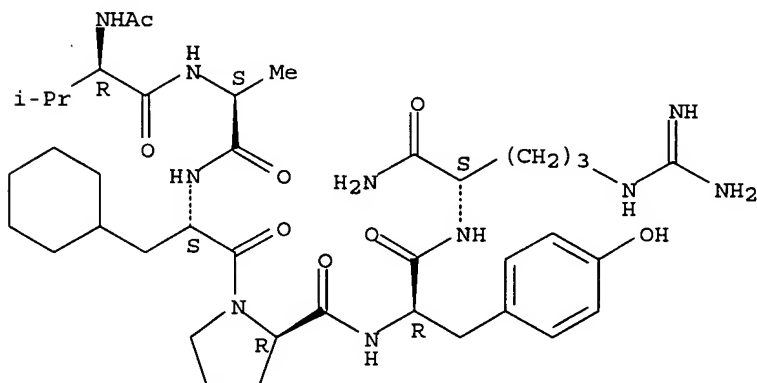
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 501937-40-2P 501937-41-3P 501937-44-6P
 501937-45-7P 501937-46-8P 501937-47-9P
 501937-48-0P 501937-49-1P 501937-50-4P
 501937-51-5P 501937-53-7P 501937-55-9P
 501937-57-1P 501937-60-6P 501937-62-8P
 (preparation of peptides for use as thrombin inhibitors for therapeutic use)

RN 501937-40-2 USPATFULL

CN L-Argininamide, N-acetyl-D-valyl-L-alanyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

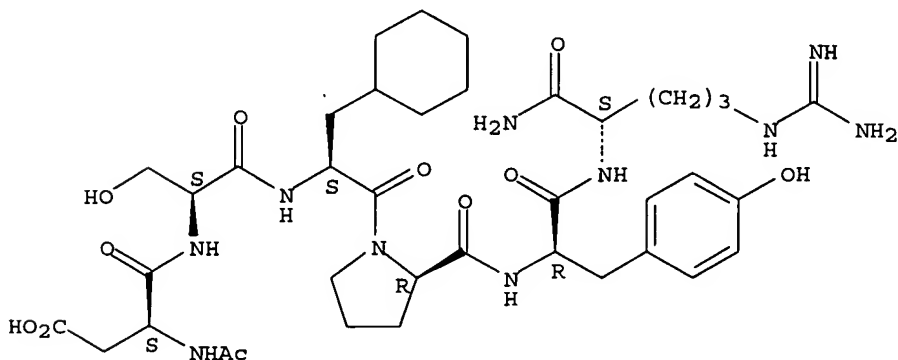
Absolute stereochemistry.



RN 501937-41-3 USPATFULL

CN L-Argininamide, N-acetyl-L- α -aspartyl-L-seryl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

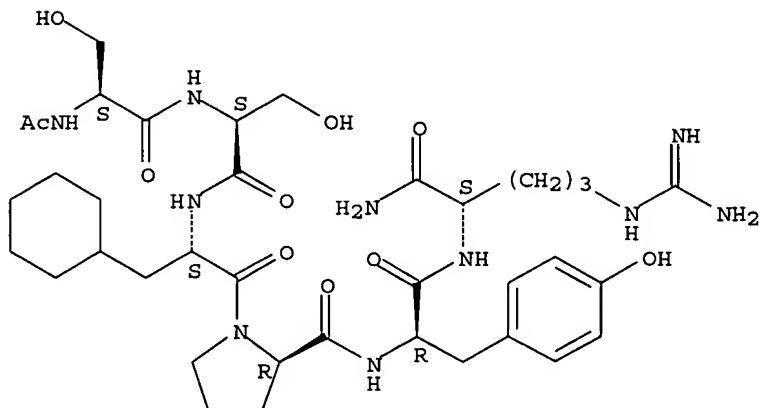
Absolute stereochemistry.



RN 501937-44-6 USPATFULL

CN L-Argininamide, N-acetyl-L-seryl-L-seryl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

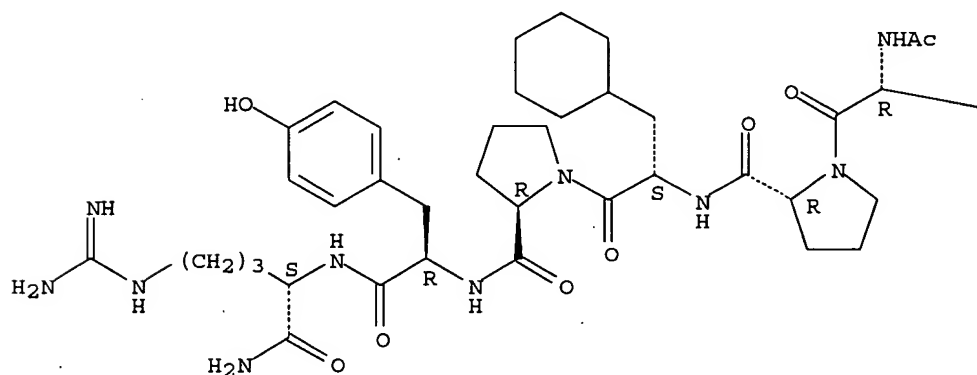


RN 501937-45-7 USPATFULL

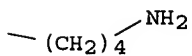
CN L-Argininamide, N2-acetyl-D-lysyl-D-prolyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

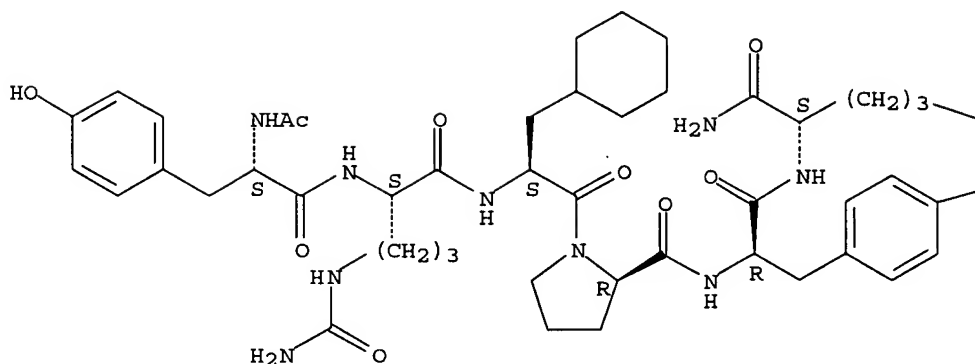


RN 501937-46-8 USPATFULL

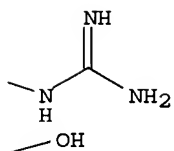
CN L-Argininamide, N-acetyl-L-tyrosyl-N5-(aminocarbonyl)-L-ornithyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



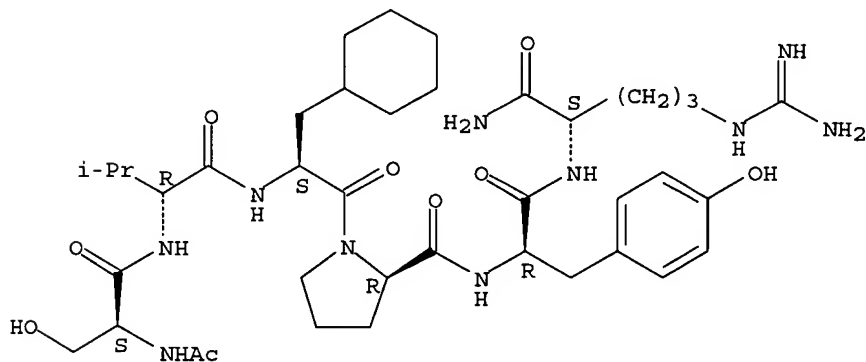
PAGE 1-B



RN 501937-47-9 USPATFULL

CN L-Argininamide, N-acetyl-L-seryl-D-valyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

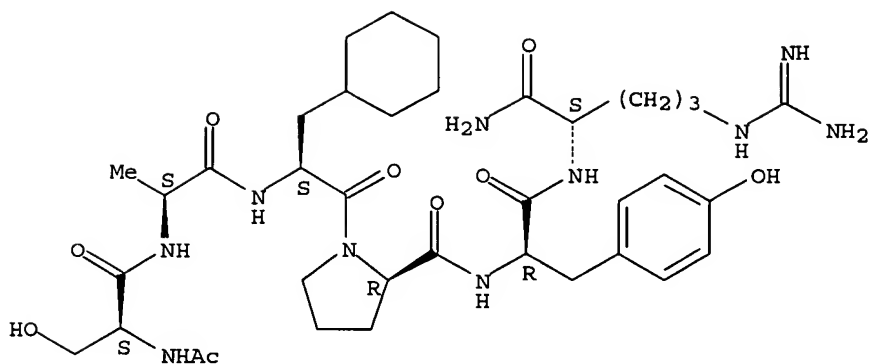
Absolute stereochemistry.



RN 501937-48-0 USPATFULL

CN L-Argininamide, N-acetyl-L-seryl-L-alanyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

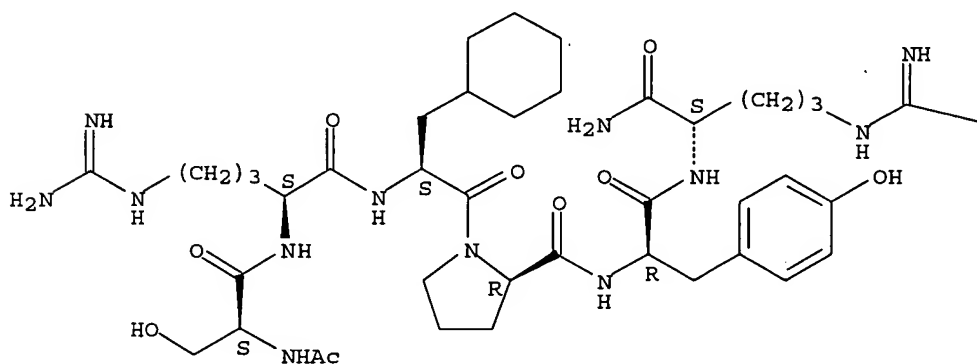


RN 501937-49-1 USPATFULL

CN L-Argininamide, N-acetyl-L-seryl-L-arginyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



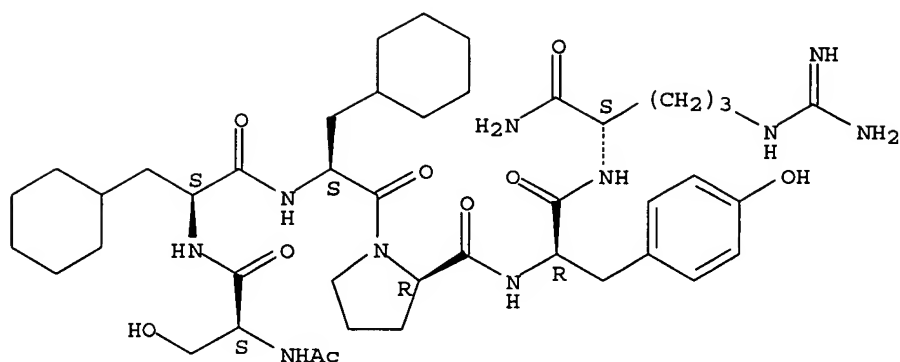
PAGE 1-B

NH₂

RN 501937-50-4 USPATFULL

CN L-Argininamide, N-acetyl-L-seryl-3-cyclohexyl-L-alanyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

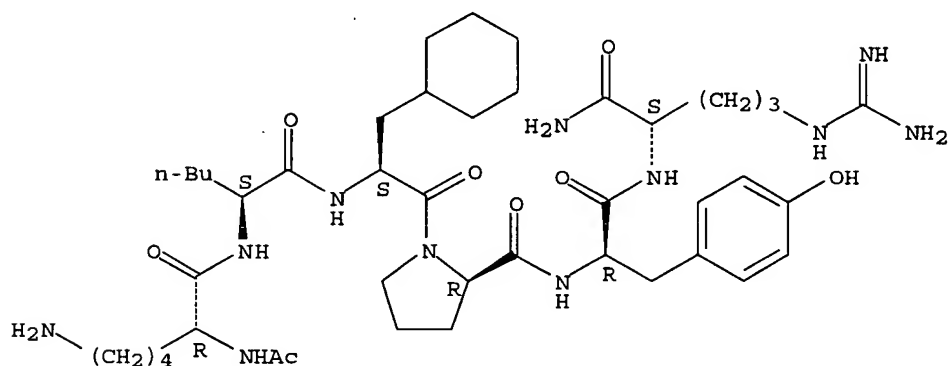
Absolute stereochemistry.



RN 501937-51-5 USPATFULL

CN L-Argininamide, N2-acetyl-D-lysyl-L-norleucyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

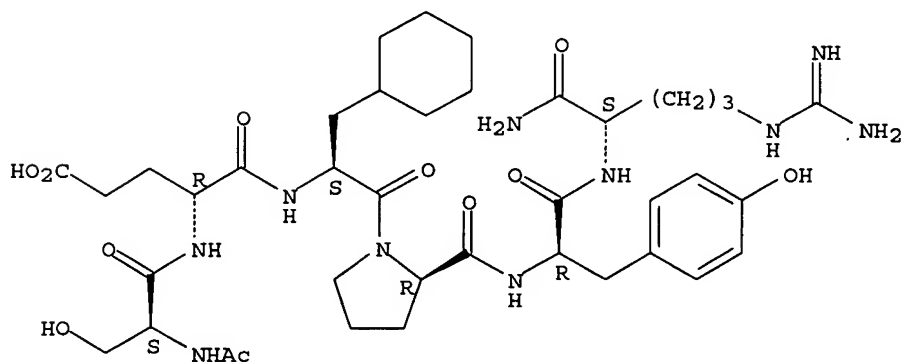
Absolute stereochemistry.



RN 501937-53-7 USPATFULL

CN L-Argininamide, N-acetyl-L-seryl-D- α -glutamyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

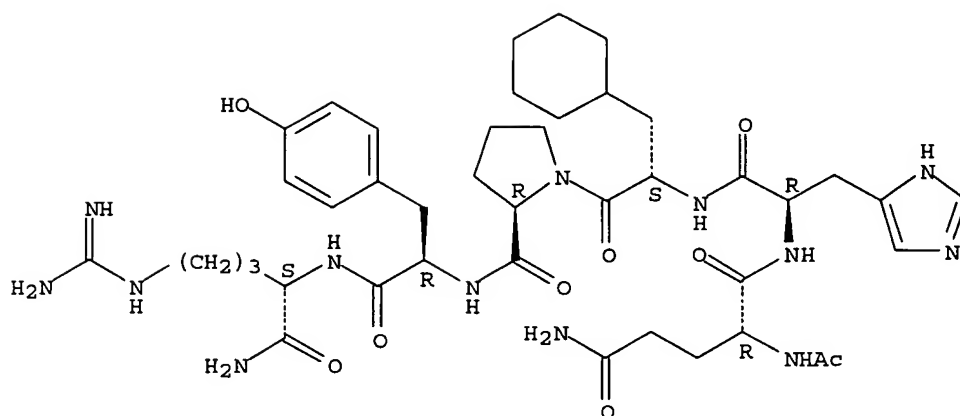
Absolute stereochemistry.



RN 501937-55-9 USPATFULL

CN L-Argininamide, N2-acetyl-D-glutaminyl-D-histidyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

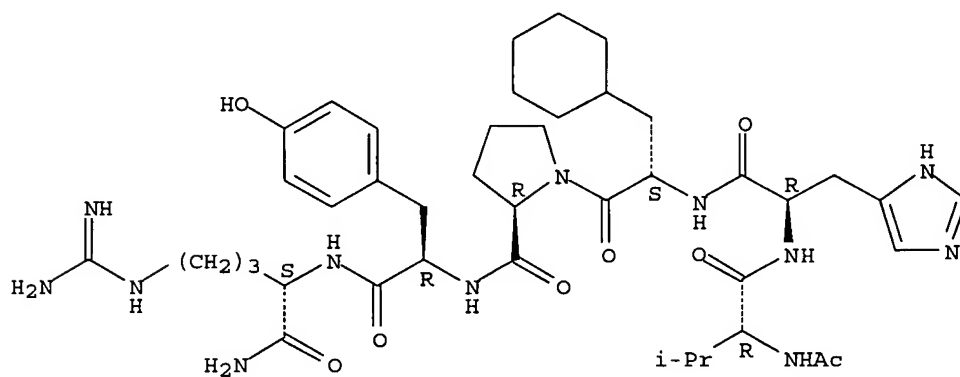
Absolute stereochemistry.



RN 501937-57-1 USPATFULL

CN L-Argininamide, N-acetyl-D-valyl-D-histidyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

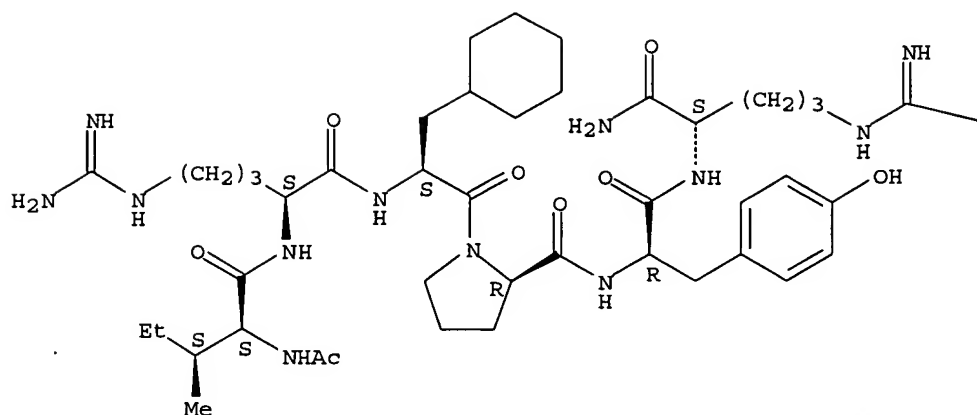


RN 501937-60-6 USPATFULL

CN L-Argininamide, N-acetyl-L-isoleucyl-L-arginyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



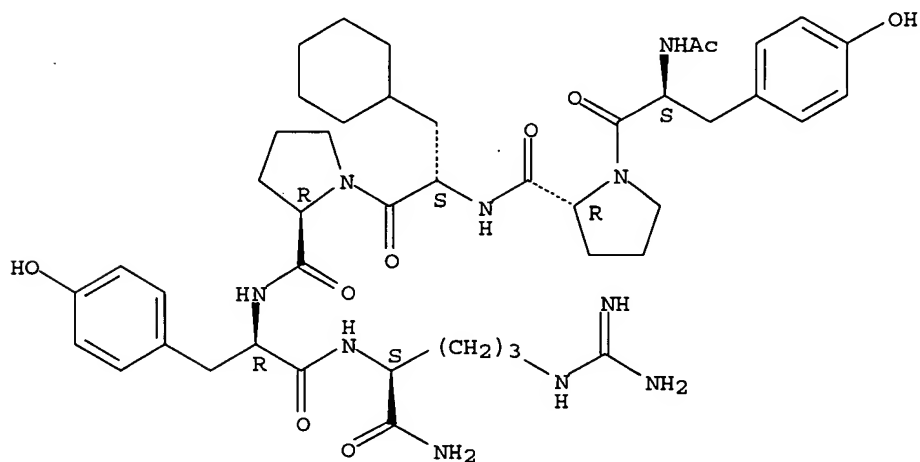
PAGE 1-B

—NH₂

RN 501937-62-8 USPATFULL

CN L-Argininamide, N-acetyl-L-tyrosyl-D-prolyl-3-cyclohexyl-L-alanyl-D-prolyl-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> d his

(FILE 'HOME' ENTERED AT 12:28:39 ON 13 JAN 2006)

FILE 'HCAPLUS' ENTERED AT 12:28:59 ON 13 JAN 2006

L1 1 US2005026843/PN OR (US2004-798218# OR DE2002-10200666# OR DE200

noble jarrell 13/01/2006

FILE 'REGISTRY' ENTERED AT 12:31:16 ON 13 JAN 2006

FILE 'HCAPLUS' ENTERED AT 12:31:25 ON 13 JAN 2006
E THURK M/AU
L2 10 E3-4
L3 5 (NOVEL (1W) SCIENCE)/CS,PA

FILE 'REGISTRY' ENTERED AT 12:32:37 ON 13 JAN 2006

FILE 'HCAPLUS' ENTERED AT 12:32:39 ON 13 JAN 2006
L4 TRA L1 1- RN : 44 TERMS

FILE 'REGISTRY' ENTERED AT 12:32:40 ON 13 JAN 2006
L5 44 SEA L4
L6 43 L5 AND SQL/FA
L7 QUE [VALI'NLE'NQSTYRK'ORN'] [VALI'NLE'STYP'CIT'RK'ORN'HEDW'CHA']
E CYCLOHEXYLGLYCINE/CN
L8 15 L6 AND SQL>=6

FILE 'HCAPLUS' ENTERED AT 13:21:56 ON 13 JAN 2006
L9 2 L8
L10 2 L9 AND L1-3

FILE 'REGISTRY' ENTERED AT 13:23:35 ON 13 JAN 2006
L11 STR
L12 5852 SEA FILE=REGISTRY CSS FUL L11
L13 0 L12 AND L5
L14 510 L12 AND 6-7/SQL
L15 QUE [VALI'NLE'NQSTYRK'ORN'] .{2} [P'AZE'] [YF] [RK'ORN''HAR']/SQSP
L16 235539 L7|L15
E CYCLOHEXYLALANINE/CN
L17 1 E4
L18 STR
L19 50 L18 CSS
L20 9238 L18 CSS FULL
L21 18 L12,L20 AND L16
L22 14 L21 AND L5-6
L23 4 L21 NOT L22

FILE 'HCAPLUS' ENTERED AT 13:42:26 ON 13 JAN 2006
L24 4 L21
L25 2 L24 AND L1-3
L26 4 L24,L25,L9-10

FILE 'HCAOLD' ENTERED AT 13:43:44 ON 13 JAN 2006
L27 0 L21,L8

FILE 'USPATFULL, USPAT2' ENTERED AT 13:44:01 ON 13 JAN 2006
L28 1 L21,L8

=>